



Dart Aerospace Ltd.
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Hawkesbury, ON
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Canada

Tel (613) 632-5200
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C45

Job Sheet 191759



Part No: C45

Job Qty: 1 pcs

Part Name: C-Series Remote Hook 4,500 lbs Lift Capacity



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/7/19

Job Tracking No:

Due Date: 4/30/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: C45 REV.2 IPP REV:A 18.01.29 NEW ISSUE DD VERF:DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	External Load - 1	1 pcs	4/30/19		0.00	3.33	External Load - 1		
							External Load - 2		
							External Load - 3		
110	External Load - 2 - B4B	1 pcs	4/30/19		0.00	3.33	External Load - 1 - B4B		
							External Load - 2 - B4B		
							External Load - 3 - B4B		
120	QC 5	1 pcs	4/30/19		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
							QC 5 - 30		
							QC 5 - 40		
130	Packaging 3-2 - Stock - B4B	1 pcs	4/30/19		0.00	0.00	Packaging 3 - 1 - B4B		
							Packaging 3 - 2 - B4B		
							Packaging 3 - 3 - B4B		
							Packaging 3 - 4 - B4B		
							Packaging 3 - 5 - B4B		
							Packaging 3 - 6 - B4B		
							Packaging 3 - 7 - B4B		

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				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
140 QC 21 - SA	1 pcs	4/30/19	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 53	

Part Op 100 - 1- PICK C45-2-1 AND LASER ENGRAVE AS PER DWG . SEE NOTE 3 AND 4 ON SHEET 3. 2- ASSEMBLE AS
 Descriptions: PER DWG 3- PERFORM ALL NECESSARY TEST USING FAI TEST SHEET.

110 - 1- PICK C45-2-1 AND LASER ENGRAVE AS PER DWG . SEE NOTE 3 AND 4 ON SHEET 3. 2- ASSEMBLE AS
 PER DWG 3- PERFORM ALL NECESSARY TEST USING FAI TEST SHEET.

120 - (QC5- Inspect part completeness to step on W/O)

130 - Identify as per dwg & Stock Location: _____)

140 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
188-FPSS-1/4-20-3/8	Set Screw	2 Ea (2 ea)	100-External Load - 1	5048557-1
188-FSCS-1032-5/8	Set Screw	4 Ea (4 ea)	110-External Load - 2 - B4B	5047611
2595K2	Heat Shrink	1 ft (1 ea)	110-External Load - 2 - B4B	5049360
32448	16-14 AWG Knife Connector	2 Ea (2 ea)	110-External Load - 2 - B4B	5151100
600.1309-A	Label	1 pcs (1 ea)	110-External Load - 2 - B4B	
600.1312	Caution Sticker	1 pcs (1 ea)	110-External Load - 2 - B4B	
AN4-23A	Bolt	2 Ea (2 ea)	110-External Load - 2 - B4B	5123434-1
AN5-21A	Bolt	4 Ea (4 ea)	110-External Load - 2 - B4B	5097081-1
C10-41	Strain Relief Connector	1 Ea (1 ea)	110-External Load - 2 - B4B	5083917
Q2-14-2	Label Rivets	2 Ea (2 ea)	110-External Load - 2 - B4B	
C45-1-1 P	Manual Knob Release	1 pcs (1 ea)	110-External Load - 2 - B4B	5029295
C45-10-1 P	Lock Spring Pin	1 Ea (1 ea)	110-External Load - 2 - B4B	5029293
C45-10-2	Lock Spring	1 pcs (1 ea)	110-External Load - 2 - B4B	5135379
C45-11-1	Sideplate, Solenoid Side	1 pcs (1 ea)	110-External Load - 2 - B4B	5164685
C45-11-2	Locating Pin	2 Ea (2 ea)	110-External Load - 2 - B4B	5089115
C45-12-1	Lock Bushing	2 pcs (2 ea)	110-External Load - 2 - B4B	5152223
C45-12-2	Lock Shaft	1 pcs (1 ea)	110-External Load - 2 - B4B	5046500
C45-12-3	Lock	1 pcs (1 ea)	110-External Load - 2 - B4B	5083337
C45-12-4	Lock Roller	1 pcs (1 ea)	110-External Load - 2 - B4B	5108073

	C45-12-5	Lock Roller Pin	1 pcs (1 ea)	110-External Load - 2 - B4B	5093171
	C45-12-6 P	Retaining Ring	2 Ea (2 ea)	110-External Load - 2 - B4B *	5029303
	C45-13-1	Keeper Bushing	2 pcs (2 ea)	110-External Load - 2 - B4B	5125630
	C45-13-2	Teflon Keeper, Spacer	2 Ea (2 ea)	110-External Load - 2 - B4B	5040660
	C45-13-3	Keeper Shaft	1 Ea (1 ea)	110-External Load - 2 - B4B	5157825
N	C45-13-4	Keeper	1 pcs (1 ea)	110-External Load - 2 - B4B *	5170638
P	C45-13-5 P	Keeper Spring	1 pcs (1 ea)	110-External Load - 2 - B4B	5029308
N	C45-2-1	Sideplate - MRK	1 pcs (1 ea)	110-External Load - 2 - B4B	5164654
	C45-3-1	Radial Bearing	2 Ea (2 ea)	110-External Load - 2 - B4B	5097909
	C45-3-10	Latch Shaft	1 pcs (1 ea)	110-External Load - 2 - B4B	5041194
	C45-3-11	Actuator	1 pcs (1 ea)	110-External Load - 2 - B4B	5042953
	C45-3-12	Latch Roller Bearing	1 Ea (1 ea)	110-External Load - 2 - B4B	5097903
	C45-3-2	Latch Roller Pin	1 pcs (1 ea)	110-External Load - 2 - B4B	5029316
	C45-3-2-1	Snap Ring	2 Ea (2 ea)	110-External Load - 2 - B4B	5097898
	C45-3-3	Latch Roller	1 pcs (1 ea)	110-External Load - 2 - B4B	5127763
	C45-3-4	Pin	2 pcs (2 ea)	110-External Load - 2 - B4B	5133668
	C45-3-4-1	Retaining Ring	4 Ea (4 ea)	110-External Load - 2 - B4B	5114803
	C45-3-5 P	Teflon Spacer	2 Ea (2 ea)	110-External Load - 2 - B4B *	5029321
N	C45-3-6	Latch	1 pcs (1 ea)	110-External Load - 2 - B4B	5029322 5165726
	C45-3-7	Link	1 pcs (1 ea)	110-External Load - 2 - B4B	5029322
	C45-3-8A	Actuator Shaft Bushing	1 pcs (1 ea)	110-External Load - 2 - B4B	5078570
	C45-3-8B	Actuator Shaft Bushing	1 pcs (1 ea)	110-External Load - 2 - B4B	5163197
	C45-3-9	Lever Spring	1 pcs (1 ea)	110-External Load - 2 - B4B	5089520
	C45-4-1 -PO	Trunnion Bushing	2 pcs (2 ea)	110-External Load - 2 - B4B *	5122724
N	C45-4-4A	C45 Load Beam Assembly	1 pcs (1 ea)	110-External Load - 2 - B4B	5166266
N	C45-4-5	Loadbeam Spacer	1 pcs (1 ea)	110-External Load - 2 - B4B	5163562
	C45-5-1	Lever Stop Pin	1 Ea (1 ea)	110-External Load - 2 - B4B	5040657
	C45-5-2	Lever Stop	1 pcs (1 ea)	110-External Load - 2 - B4B	5029330
	C45-7-1	LOADBEAM BUMPER	1 pcs (1 ea)	110-External Load - 2 - B4B	5156421
N	C45-7-2	Lock Bumper	2 pcs (2 ea)	110-External Load - 2 - B4B	5163721
N	C45-8-1-2	Solenoid Nut	2 pcs (2 ea)	110-External Load - 2 - B4B	5163955
N	C45-8-2	Solenoid	1 pcs (1 ea)	110-External Load - 2 - B4B	5157835
N	C45-8-4	Solenoid Cover Gasket	1 pcs (1 ea)	110-External Load - 2 - B4B	5171779
P	C45-8-5	Solenoid Cover	1 pcs (1 ea)	110-External Load - 2 - B4B *	5046392
	C45-9-1	Clock Spring Cover	1 pcs (1 ea)	110-External Load - 2 - B4B	5029337
	C45-9-2	Clock Spring	1 pcs (1 ea)	110-External Load - 2 - B4B	5107946
	EL-PLUG-M	3-Prong Male Spade Plug	1 Ea (1 ea)	110-External Load - 2 - B4B	5161539
01004-08-047	EL314-SJTOW	Long Line Electrical Wire, 14/3 Gauge	1 ft (1 ea)	110-External Load - 2 - B4B	5165111
	MS21044N5	Nut	4 Ea (4 ea)	110-External Load - 2 - B4B	5097089
	MS27039-4-08	Screw	1 Ea (1 ea)	110-External Load - 2 - B4B	5039330-1
	NAS1149F0463P	Washer	3 Ea (3 ea)	110-External Load - 2 - B4B	5097088-2
	NAS1149F0563P	Washer	8 Ea (8 ea)	110-External Load - 2 - B4B	65067901
					② 5098031-1

Lactite 242 (M138933)
 Laf-T-ze (M128063)
 Silicone grease (M139008)
 Aeroshell grease NO.7 (M138964)

PARTS
 ALLOCATED

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AM4-24A = 5183233

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-External Load - 1	188-FPSS-1/4-20-3/8	2	122	0
110-External Load - 2 - B4B	188-FSCS-1032-5/8	4	106	0
	2595K2	1	19	0
	32448	2	219	0
	600.1309-A	1	97	0
	600.1312	1	19	0
	AN4-23A	2	690	0
	AN5-21A	4	364	0
	C10-41	1	28	0
	C2-14-2	2	188	0
	C45-1-1	1	7	0
	C45-10-1	1	162	0
	C45-10-2	1	11	0
	C45-11-1	1	0	0
	C45-11-2	2	43	0
	C45-12-1	2	15	0
	C45-12-2	1	5	0
	C45-12-3	1	11	0
	C45-12-4	1	19	0
	C45-12-5	1	47	0
	C45-12-6	2	114	0
	C45-13-1 <i>AD</i>	2	0	0
	C45-13-2	2	70	0
	C45-13-3	1	8	0
	C45-13-4	1	0	0
	C45-13-5 <i>P</i>	1	0	0
	C45-2-1	1	3	0
	C45-3-1	2	121	0
	C45-3-10	1	9	0
	C45-3-11	1	5	0
	C45-3-12	1	86	0
	C45-3-2 <i>P</i>	1	0	0
	C45-3-2-1	2	93	0
	C45-3-3	1	25	0
	C45-3-4	2	60	0
	C45-3-4-1	4	165	0
	C45-3-5	2	99	0
	C45-3-6	1	4	0
	C45-3-7 <i>P</i>	1	0	0
	C45-3-8A	1	30	0
	C45-3-8B	1	5	0
	C45-3-9	1	31	0
	C45-4-1	2	16	0
	C45-4-4A	1	4	0
	C45-4-5	1	4	0
	C45-5-1	1	46	0
	C45-5-2 <i>P</i>	1	0	0
	C45-7-1	1	18	0
	C45-7-2	2	4	0
	C45-8-1-2	2	0	0
	C45-8-2	1	6	0
	C45-8-4	1	9	0
	C45-8-5	1	19	0
	C45-9-1 <i>P</i>	1	0	0
	C45-9-2	1	45	0
	EL-PLUG-M	1	31	0
	EL314-SJTOW	1	718	0
	MS21044N5	4	89	0
	MS27039-4-08	1	229	0
	NAS1149F0463P	3	563	0
	NAS1149F0563P	8	433	0

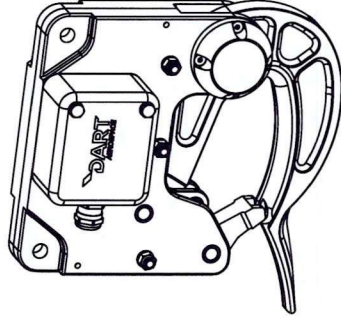
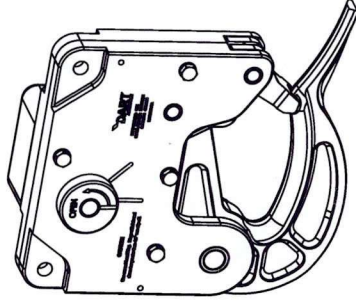
Part Specifications

Specifications could not be found.

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ASTY QTY	ASTY QTY	Part #	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
		C45-1-1	1 MANUAL KNOB RELEASE	6061		2
		C45-2-1	1 SIDE PLATE	7075-T6		2
		C45-3-1	2 RATCH BEARING		[KAMAN #1605-285]	3
		C45-3-2	1 LATCH ROLLER PIN	O-1		3
		C45-3-3	2 SNAP RING	STEEL		3
		C45-3-4	1 LATCH ROLLER	4140/4142		3
		C45-3-5	2 LINK PIN	O-1		3
		C45-3-6	4 RETAINING RING	BERYLLEUM COPPER	3/16 SHAFT [MCMASTER-CARR #98410A110]	3
		C45-3-7	2 SPACER	TEFLON	[MCMASTER-CARR #9560A1180]	3
		C45-3-8	1 LATCH	17-4 S.S.		3
		C45-3-9	1 LINK	O-1		3
		C45-3-10	1 ACTUATOR SHAFT BUSHING	AL BRONZE 630		3
		C45-3-11	1 ACTUATOR SHAFT BUSHING SOLENOID SIDE	AL BRONZE 630		3
		C45-3-12	1 LEVER SPRING	303 S.S.		3
		C45-3-13	1 LATCH SHAFT	17-4 S.S.		3
		C45-3-14	1 ACTUATOR	17-4 S.S.		3
		C45-3-15	1 DU BEARING	[KAMAN 0621045]		3
		C45-4-1	2 TRUNNION BUSHING	AL BRONZE 630		2
		C45-4-2	1 LOAD BEAM SPACER	4140/4142 Q&T		2
		C45-5-1	1 LEVER STOP PIN	STEEL	1/4 X 1-3/8 [MCMASTER-CARR #9581A545]	2
		C45-5-2	1 LEVER STOP	304 S.S.		2
		C45-7-1	1 LOAD BEAM BUMPER	POLYURETHANE		2
		C45-7-2	2 LOCK BUMPER	POLYURETHANE		2
		C45-8-1-1	2 SOLENOID NUT	304 S.S.		2
		C45-8-2	1 SOLENOID ASSY	[REF: H-2553-020]		2
		C45-8-4	1 SOLENOID COVER GASKET	BLENDED RUBBER		2
		C45-8-5	1 SOLENOID COVER	6061		2
		C45-9-1	1 CLOK SPRING COVER	6061		2
		C45-9-2	1 CLOK SPRING	303 S.S.	1/3 X .75 X 1.5 DENDOFF SPRING	2
		C45-10-1	1 SPRING PIN	S.S.	1/4 X 1.0 [MCMASTER-CARR #2373A183]	2
		C45-10-2	1 LOCK SPRING C45 HOOK	302 S.S.		3
		C45-11-1	1 SIDE PLATE SOLENOID	7075-T6		2
		C45-11-2	2 LOCATING PIN	S.S.	283/16 X 1 [MCMASTER-CARR #90145A110]	2
		C45-12-1	2 LOCK BUSHING	4140/4142		3
		C45-12-2	1 LOCK SHAFT	4140/4142		3
		C45-12-3	1 LOCK	4140/4142		3
		C45-12-4	1 LOCK ROLLER	4140/4142		3
		C45-12-5	1 LOCK ROLLER PIN	4140/4142		3
		C45-12-6	2 RETAINING RING	STEEL	[KAMAN #N1400-0050]	3
		C45-13-1	2 KEEPER BUSHING	4140/4142		3
		C45-13-2	2 SPACER	[MCMASTER-CARR #9560A210]		3
		C45-13-3	1 KEEPER SHAFT	4140/4142		3
		C45-13-4	1 KEEPER	4140/4142		3
		C45-13-5	1 KEEPER SPRING	303 S.S.	CHAMBERLAIN SPRING	3
		6001309	1 LABEL	ALUMINUM		N/S
		6001309-A	1 LABEL	ALUMINUM		N/S
		B/O C214-2	1 CAUTION STICKER			N/S
		B/O C214-2	2 LABEL RIVETS	18-8 S.S.	NQ 4 [MCMASTER-CARR #9165A1100]	N/S
		B/O 188-PSS-1/4-20-3/8	2 SET SCREW	S.S.	1/4-20 [MCMASTER-CARR #9231A335]	2
		B/O 188-PSS-1025-5/8	4 SCREW	S.S.	10-32 X 5/8 FSHCS [MCMASTER-CARR #9221UA303]	2
		B/O ANH-23A	2 BOLT	STEEL	1/4-28 X 2.41	2
		B/O ANS-21A	4 BOLT	STEEL	5/16-24 X 2.22	2
		B/O MS2104ANS	4 LOCK NUT	S.S.	5/16	2
		B/O AN960-416	3 WASHER	STEEL	1/4	2
		B/O AN960-516	8 WASHER	STEEL	5/16	2
		B/O MS2709-408	1 BOLT	STEEL	1/4-28 X .531	2
		B/O EL 314-5/TOW 3/14	3 WIRE	[TECAN 314-5/TOW 3/14]		2
		B/O 32448	2 16-14 AWG KNIFE CONNECTOR	[JALIED ELECTRONICS 32448]		2
		B/O C10-41	1 STRAIN RELIEF CONNECTOR	BRASS	1/2 TRADE SIZE [MCMASTER-CARR #607K14]	2
		B/O EL-PLUG-M	1 MALE PLUG	PE High Density	[MCMASTER-CARR #7216A5]	2
		B/O	1 HEAT SHRINK TUBE	RUBBER	[MCMASTER-CARR #2595C22]	N/S



NOTES:
1. FOR REBUILD ONLY.
2. FOR CUSTOMER REBUILD ONLY.

DART AEROSPACE	
C45-HOOK	
TITLE	C45
REV	2
DATE	1/20/2015
APPROVED	D. Ward
DESIGNED	
CHECKED	
FRACCTIONS	1/8
ANGLE	1.5°
1. BREAK ALL SHARP EDGES .015 X .45"	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE	1:4
DATE	
SHEET 1 OF 3	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Remote Cargo Hook Test Form

C45

Work Order

191759

Customer

14952

Serial Number

5167651

Date

2019-5-29

# of Releases	Load (Lbs.)	Release Method	Remarks	Result	Pass/fail
1	11,250	Static Hold	Hold for two Minutes and reduce load to zero	N/A	Pass
10	2,250	Electircal, 25 volts	No "hang ups" permitted	N/A	Pass
2	4,500	Electircal, 22 volts	Current shall not exceed 12.4A	9.0 A	Pass
2	3,500	Electircal, 22 volts	Current shall not exceed 12.4A	8.9 A	Pass
2	2,500	Electircal, 22 volts	Current shall not exceed 12.4A	8.8 A	Pass
2	1,500	Electircal, 22 volts	Current shall not exceed 12.4A	8.8 A	Pass
2	500	Electircal, 22 volts	Current shall not exceed 12.4A	8.7 A	Pass
1	4,500	Electircal, 20 volts	Current shall not exceed 11.3A	8.0 A	Pass
1	4,500	Electircal, 28 volts	Current shall not exceed 15.8A	10.7 A	Pass
1	4,500	Manual		N/A	Pass
1	4,500	Impact Test	Impact shackle 10 times, shall not release	N/A	Pass
1	N/A	Solenoid Ohms	Shall not exceed 1.7-2.0 Ohms	2.0 Ohms	Pass
1	N/A	Electircal Continuity	Across both wires	N/A	Pass

Test Conducted By:

Michael Labrude

Technician

Signature:

Sylvia Sanchez

QC 5 Small FAB / QA

Submit